To make paper, the Chinese husked bamboo with a mortar and pestle. It was then placed in a pool of lime to soften for several days. A month of steaming and boiling in a big kiln, drying, and repeated steaming and boiling followed. The material was then ground into pieces and put into a pool of pure water. The mulch of birch leaves was added to provide adhesion and smoothness. The resulting paper was then squeezed and hung to dry in sheets.

Knowledge of papermaking did not make its way to Europe for several centuries. Until then, those few people who could write used papyrus, the stem of a Mediterranean plant cut into thin strips, as the Egyptians did, or parchment, which was goatskin or sheepskin treated specially for writing.

Tang and Song Dynasties

The Tang and Song dynasties are known as Golden Ages in Chinese history. The earlier Han dynasty collapsed for several reasons. Weak leadership caused internal problems, and Huns from Central Asia swept in and took control. Between 220 and 618 CE, China was divided into three kingdoms. In 618 CE, the Tang came to power and ushered in almost 300 years of expansion, prosperity, and innovation. Confucianism was made the basis of government, and a system of civil service examinations was instituted by which men were selected for public office. Buddhism was supported by most Tang emperors, and historians believe the religion had its greatest influence during this dynasty. The Chinese during the Tang dynasty were also noted for their beautiful poetry and fine porcelain wares.

The Tang dynasty was overthrown in 907 CE by one of its own generals. The next 53 years brought another period of warfare between states competing for control of China. In 960 CE, a period of stability began under the Song and lasted until 1279, when the Mongols invaded China and took control.

As in the Tang dynasty, China during the Song dynasty was prosperous, organized, and efficiently run. People had time to devote to the arts. Landscape painting became an important art style. Poetry and history flourished. Chinese porcelain, known popularly as china, became a prized trade good. Either white or colored, plain or delicately painted, these earthenware bowls, plates, pitchers, and decorative pieces were produced in China for 1,000 years before Europeans discovered the process.

Trade

One of the practical innovations developed under the Tang was the Grand Canal. At the time the world's longest human-made canal, it linked the Huang He and the Ch’ang Rivers and encouraged north-south trade within China.

During the Tang and Song dynasties, China continued to participate in the international trade networks that took Chinese goods to India, West Africa, the Arabian Peninsula, and Europe. Chinese merchants themselves went as far as the Malay Peninsula. Silk remained the largest Chinese export.

Inventions: Compass, Paper Money, Gunpowder

Several of the inventions and innovations that developed during the Tang and Song dynasties aided trade. Sometime before the 1100s, the Chinese had devised the magnetic compass for use in planning the layout of their temples, but in 1119, they discovered that it was useful for navigation. Since the compass pointed north,
Navigators could use it to be sure they were traveling in the right direction. The compass did not reach Europe until the 1200s. It was one of the navigational devices that enabled Europeans to embark on their voyages of exploration in search of an all-water route to Asia.

Paper money came into use in China during the Song dynasty. The Chinese, as well as other peoples, had been using metal coins for centuries, but the Chinese were the first to use paper currency. Two other inventions converged to make the use of paper currency possible. First, the Chinese had invented the process of making paper in 105 CE, and then, during the Tang dynasty in the 700s CE, they had learned how to print from large blocks of type—the words for a page were carved into a single block of wood the size of the page, then inked, and paper applied. In the 1040s, the Chinese had invented the use of movable type for printing. The characters for individual words were carved into small pieces of wood and assembled to make a page, then inked, and paper applied. Europeans would not employ movable type until the time of Gutenberg, about 1450. Marco Polo, who traveled and lived in China for 20 years in the 1200s, noted in the journal of his travels that:

The coinage of this paper money is authenticated with as much form and ceremony as if it were actually of pure gold or silver. To each note a number of officers, specially appointed, not only subscribe their names, but affix their seals also . . . . All his [Khan's] subjects receive it [paper money] without hesitation, because, wherever their business may call them, they can dispose of it again in the purchase of merchandise.

Polo’s readers received this news with surprise because paper currency was unknown in Europe.

The military use of gunpowder was another invention of the Song dynasty. Gunpowder was first used in the Tang dynasty to make fireworks. In order to fight off the Mongols from Central Asia in the 1100s, the Chinese developed rockets that were propelled by gunpowder.

**Mongol Invasions**

In about 1200, the Mongols, nomadic warriors of Central Asia, set out to conquer the world. By 1294, their four khanates, as their units of organization were called, extended across southern Russia from Korea and the Pacific Ocean to the Black Sea, reached into the Arabian Peninsula, and included almost all of China and some of Southeast Asia.

**Chinggis Khan and the “Golden Horde”**

Chinggis [CHIN-giz KHAN] (also spelled Ghengis) Khan—which means “ruler of the universe”—started the Mongols on their world conquest. His army of well-disciplined, well-trained horsemen was known as the “Golden Horde,” because the early khanhs—“khan” is a title similar to the European title of “king”—lived in gold-colored tents. Fierce nomadic fighters, the Golden Horde struck terror in the hearts of their opponents.

**Khubilai Khan and the Yuan Dynasty**

Khubilai [KOO-bil-eye] (also spelled Kublai) Khan was Chinggis Khan’s grandson, and it was he who took the Mongol Empire to its greatest expanse.